

## REMARKS

### Drawings

Figs.11, 12, 13A to 13D, and 14 have been labeled with "PRIOR ART." Other objections to the drawings have been addressed by amending the specification appropriately. Specifically, circuit elements 52 have been changed to circuit elements 52A and 52A, mounting portions 63 have been changed to mounting portions 65, and electrodes 56 have been changed to electrodes 56A, 56B, and 56C to make the specification and the drawings consistent with each other. Withdrawal of the objections to the drawings is respectfully requested.

### Specification

A new title provided herein to more clearly indicate the invention to which the claims are directed.

### Claim Rejections – 35 USC §112

Claims 1 to 16 have been rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, and 10 to 16 have been amended as follows to obviate the indefinite rejections of claims 1 to 16. The relevant amended portions have been bolded for ease of reference.

1. (Currently Amended) A circuit device manufacturing method comprising:  
preparing a conductive foil;  
**providing in the conductive foil, isolation trenches having a depth less than a thickness of the conductive foil;**  
providing a conductive plating layer on the conduction foil between the isolation trenches, said conductive plating layer being recessed from edges of the conduction foil;  
**providing circuit elements on the conductive plating layer;**  
providing an insulating resin to cover collectively the circuit elements and to fill the isolation trenches;  
**forming conductive patterns by removing the conductive foil from opposite to the side where the circuit elements are provided until the insulating resin in the trenches is exposed; and**

dicing the insulating resin appropriately to separate the circuit elements.  
(Emphasis added.)

2. (Currently Amended) The circuit device manufacturing method according to claim 1, further comprising:

electrically connecting electrodes of the circuit elements to the conductive foil before providing the insulating resin.

10. (Currently Amended) The circuit device manufacturing method according to claim 8, wherein a position of the wire bonding is determined by contrasting between a region of the conductive foil without the conductive plating and a region of the conductive plating layer on the conductive foil.

11. (Currently Amended) The circuit device manufacturing method according to claim 1, wherein the insulating resin is provided by transfer molding.

12. (Currently Amended) The circuit device manufacturing method according to claim 1, wherein the circuit elements are provided in blocks which are aligned in matrix fashion on the conductive foil.

13. (Currently Amended) The circuit device manufacturing method according to claim 12, wherein the insulating resin is provided by transfer molding for every block.

14. (Currently Amended) The circuit device manufacturing method according to claim 12, wherein the insulating resin is diced to separate the blocks.

15. (Currently Amended) The circuit device manufacturing method according to claim 14, wherein the dicing is carried out by using alignment marks provided at a periphery of each block.

16. (Currently Amended) The circuit device manufacturing method according to claim 14, wherein the dicing is carried out by using opposing alignment marks provided at a periphery of each block.

All the amendments to obviate the indefinite rejections are editorial in nature and are supported by the specification and/or drawings. No new matter has been added.

Furthermore, a feature in claim 1 has been amended to read: "providing a conductive plating layer on the conduction foil between the isolation trenches, said conductive plating layer being recessed from edges of the conduction foil." This amendment is supported for example by Figs. 6, 7A, and 8 where the conductive plating layer 81 is shown recessed from the edges of the conductive pattern 51A between the two isolation trenches 61 or the layer 81 from the edges of the pattern 51B and so forth. Furthermore, see also, page 10, lines 9 and 10 where is it

indicated that the conductive plating layer is indicated to cover the conductive pattern partially, and original claim 4 and page 14, line 23 to page 15, line 1 where they indicate that the conductive plating layer is formed smaller than the conductive pattern. No new matter has been added.

Amendments to claim 10 are supported, for example, at page 16, line 22 to page 17, line 1. No new matter has been added.

### Claim Rejections – 35 USC §103

Claims 1 to 11 have been rejected as being unpatentable over Lin in view of Coffman. However, Applicants respectfully submit that claims as amended would not have been obvious to a person of ordinary skill in the art from the cited prior art references at least for the following reasons.

Claim 1 has been amended to read:

1. (Currently Amended) A circuit device manufacturing method comprising:  
    preparing a conductive foil;  
    providing in the conductive foil, isolation trenches having a depth less than a thickness of the conductive foil;  
    **providing a conductive plating layer on the conduction foil between the isolation trenches, said conductive plating layer being recessed from edges of the conduction foil;**  
    providing circuit elements on the conductive plating layer;  
    providing an insulating resin to cover collectively the circuit elements and to fill the isolation trenches;  
    forming conductive patterns by removing the conductive foil from opposite to the side where the circuit elements are provided until the insulating resin in the trenches is exposed ; and  
    dicing the insulating resin appropriately to separate the circuit elements.  
(Emphasis added.)

Neither Lin nor Coffman shows a conductive plating layer being recessed from edges of a conduction foil. In Lin, the layers 242 and 244 over the copper foil 235 are not recessed from the edges of the copper foil 235. In Coffman, the layers 31 and 32 (and other similar layers) are

shown to protrudes beyond the edges of the copper 29 (see Fig. 6, for example). Thus, the prior art references do not disclose, teach, or suggest the above bolded feature of claim 1.

The above bolded feature is not merely a matter of design choice. As indicated on page 16, line 22 to page 17, line 1, to recognize the patterns of die pads and bonding pads, the conductive plating layer and the conductive pattern are distinguished from each other based on the contrast between the recessed conductive plating layer and the exposed conductive pattern. Furthermore, the exposed conductive pattern promotes greater adhesion to the insulating resin. The conductive plating layer made of Ag or Au is less adhesive than the conductive pattern made of, for example, copper.

Dependent claims 2 to 11 are believed to be allowable at least for the same reasons as claim 1.

#### New Claims

Claims 17 to 19 are not disclosed, taught, or suggested by the cited prior art references. That is, the prior art references do not show (1) providing a resist layer on the trenches, (2) selectively removing the resist layer, and (3) non-selectively removing the backside of the conductive foil. That is, neither Lin nor Coffman shows covering their trenches with a resist layer, selectively removing this resist layer, and removing non-selectively the backside of the conductive foil until the resin is exposed in the trenches. For example, in Lin and Coffman, the backsides of the substrate is etched selectively (see Fig. 12 – Lin, and Fig. 7 – Coffman).

New claims are supported by the drawings, Figs. 5A, 5B, and 6, and the accompanying description on pages 14 and 15 of the specification.

#### Allowable Subject Matter

Claims 12 to 16 are deemed to be allowable if rewritten to overcome the indefinite rejections and to include all of the limitations of the base claim and any intervening claims. Claims 12 to 15 have been amended to overcome the indefinite rejections. Also, the base claims

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and any intervening claims are believed to be allowable at least for the foregoing reasons.

Therefore, claims 12 to 16 as amended are also believed to allowable.

#### Summary

For the foregoing reasons, all of the pending claims 1 to 19 are believed to be allowable over the cited prior art references.

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In the drawings:

Figs. 11, 12, 13A-13D, and 14 have been labeled with "PRIOR ART." Other objections to the drawings have been addressed by amending the specification as shown above to correct references not indicated in the drawings. Withdrawal of the objections to the drawings is respectfully requested.